REMARKS

Claims 1 and 3-14 are pending in the application; claim 2 is canceled; new claims 13 and 14 are added.

Specification

The abstract has been amended to delete the wording used in the title.

The paragraphs 0021 and 0029 have been amended as suggested by the examiner.

Claim Objections

Claim 6 has been corrected as suggested by the examiner.

Claim 8 has been amended as suggested by the examiner.

Rejection under 35 U.S.C. 102

Claims 1-3 and 6-12 stand rejected under 35 U.S.C. 102(b) as being anticipated by *Murray (US 2002/0069937)*.

Claim 1 has been amended to include the features of claim 2. Claim 1 as amended defines that, when transporting the pieces of wood from the measuring station to a sawing station, a second piece of wood that trails immediately a first piece of wood being cut in the sawing station is already transported into the sawing station while the first piece of wood is still being cut and a feeding velocity of the second piece of wood is controlled by a control unit such that the second piece of wood does not contact the first piece of wood within the sawing station.

The cited reference *Murray* discloses a method and an apparatus for bucksawing logs. The logs are moved past scanners 56, 57 and their length is determined by the scanners. As can be taken from the illustration of Fig. 5 and the description in regard to Fig. 5, the two scanners 56, 57 are correlated with two conveyors 54, 55 that are positioned parallel to one another and aligned with additional conveyers 60, 62, respectively. By doubling the transport devices 54, 60; 55, 62 the efficiency of the device is increased. For example, with such an arrangement two logs can be transported parallel to one another through the device. After the logs have been measured by means of the scanners 56, 57, the logs are laterally moved by means of device 59 onto an another conveyer 14. This conveyor 14, as shown in Fig. 5, is arranged between the two transport

devices 55, 60; 54, 62. The logs are alternatingly pushed from one or the other transport device 55, 60; 54, 62 onto the centrally arranged conveyer 14 transverse to a longitudinal direction of the logs. The two scanners 56, 57 are therefore not aligned with the conveyor 14 that leads to the sawing station. This means that the velocity of the transport devices 55, 60; 54, 62 during the measuring process by means of the scanners 56, 57 is constant. In this area there is no variable speed of the logs, respectively.

Upstream of the sawing station there is a photocell 28 and downstream of the sawing station behind the cut-off saw 26 there is another photocell 29. As soon as the logs pass the photocell 28, the rolls 18 through 21 for transporting the logs are switched on. The rolls 20, 21 are pivoted by means of their arms 22, 23 or by only one arm 23 inwardly until the rolls 20, 21 engage the log. The photocell 29 stops the drive action of the rolls 18 to 21 as soon as the log has reached a position for performing a sawing cut in the sawing station.

Even though *Murray* indicates that the conveyor 14 can be continuously driven while the rolls 18 to 21 are stopped in order to reduce gaps between the individual logs, there is no concrete method being taught to do so. In particular it is nowhere taught that a second piece of wood that trails immediately a first piece of wood being cut in the sawing station is already transported into the sawing station while the first piece of wood is still being cut. There is also nothing disclosed in regard to actively controlling the feeding speed of the second log such that the second log does not contact the first log within the sawing station. There is nothing disclosed in regard to the distance between the logs transported on the conveyor 14 into the sawing station with feed rolls 18-21 and cut-off saw 26.

The examiner refers to paragraph 0041 as disclosing that the second piece of wood is transported into the sawing station while the first piece of wood is still being cut and to paragraphs 0038 and 0053 as disclosing that the feeding velocity is selected such that the second piece of wood does not contact the first piece of wood.

Paragraph 0041 only sets forth that the conveyor 14 can be driven while the rolls 18-21 are stopped for sawing thereby reducing the gap between the logs; alternatively, conveyor 14 and rolls 18-21 can be stopped simultaneously. The disclosure in regard to reduction of the gap between logs does not mean or suggest that the second log enters

the sawing station while the first log is being cut - without any indication as to how big the gap is (several meters? the length of a log?) and the speed of the conveyor 14, the reduction in gap size cannot imply what examiner suggests. Note that the Figs. 1 to 4 show only a single log being transported through the system - there is no indication where the next log is located along the transport path. The disclosure that the conveyor 14 is continuously driven while the rolls 18-21 are stopped during sawing cannot suggest that the second (trailing) log is already transported into the sawing station while the first log is still being cut - note that Fig. 4 shows the log 12 leaving the sawing station; no second log is shown on the conveyor. The feed roll 21 is in the disengaged position in Fig. 4 and must be activated by the next log passing the photocell 28 in order to grip the next log. Note also that paragraph 0037 sets forth that a controller (computer) is provided that controls the operation of the rolls 18 to 21 and of the saw pivot arm 27; it does not set forth that the conveyor 14 conveyor is controlled in relation to the rolls 18-21. The controller only deals with the actual bucking operation.

Paragraphs 0038 and 0053 relate to the cut-off process on one and the same log but do not relate to controlling the distance or gap between sequentially transported logs being fed to the sawing station. Note that 0053 relates to providing a multi-positional cut-off saw 106 - this improves the sawing process but has nothing to do with the spacing between logs being fed to the saw.

In the present invention the key issue is that the second (trailing) piece of wood 1 is transported into the sawing station 3 already when the first piece of wood 1 that is already in the sawing station is still being cut. According to the invention, the feeding speed of the trailing piece of wood 1 is controlled such that it enters the sawing station 3 in such a way that the spacing between the leading piece of wood already in the sawing station and the trailing piece of wood is minimized. The leading piece of wood after the sawing process on the sawing station 3 is moved out and the trailing piece of wood follows at minimal spacing. This is achieved in that a control 12 is provided with which the feeding speed of the second piece of wood entering the sawing station can be controlled. See paragraphs 0023, 0024, and 0029 of the instant specification. The control unit, based on input signals provided by scanners 11, 13, adjusts the speed of the transport belts 7 and

9 such that the sequentially transported pieces of wood have a minimal spacing relative to one another. The position of the pieces of wood is continuously monitored (see paragraph 0030) so that the facing ends will not collide.

Murray does not suggest feeding the second piece of wood into the sawing station as the first piece of wood is still being cut and also does not suggest controlling the feeding speed such that contact between the pieces of wood is avoided.

Claim 1 as amended is therefore not anticipated or obvious in view of *Murray*.

Rejection under 35 U.S.C. 103

Claims 4 and 5 stand rejected under 35 U.S.C. 103(a) as being unpatentable over *Murray (US 2002/0069937)* and *Bolton et al. (US 4,934,228)*.

Claim 4 describes a method in which the feeding speed of the pieces of wood is continuously recalculated. No preadjusted values are activated for the calculation. This measure is neither disclosed in *Murray* nor in *Bolton et al.*

Claim 5 defines a method according to which a position of the pieces of wood is continuously monitored and the control unit recalculates the feeding velocity based on the continuously monitored positions of the pieces of wood.

The secondary reference *Bolten et al.* discloses scanners 40, 42 that are used for determining the relative position of defects on their path to the cutting apparatus in conjunction with the speed of the conveyor on which the sheet material is transported. The encoder 50 provides the computer with the actual speed of the conveyor for calculating when the defects have reached the cutter for actuating the cutter (col. 7, lines 1-5).

Examiner argues that the conveyor speed is variable based on the wood's position and that it would have been obvious to use the variable speed of *Bolten et al.* in the device of *Murray*.

Examiner's argument is not understood. There is no disclosure as to the conveyor speed being varied in accordance with the position of the piece of wood. It is disclosed that the position of the defect is calculated based on the time when the defect passes the scanner and the speed of the conveyor that is measured by the encoder so that the defects's position is known along the path to the cutter and the cutter can be activated when the defect passes it. There is no variable speed control based on the wood's

position. The encoder 50 is used to measure the exact speed instead of using a theoretical speed value at which the conveyor is operated. The actual conveyor speed can of course fluctuate due to slip of the conveyor on the pulleys or fluctuations in the driving power etc. so that inputting a fixed speed into calculations of the movement of the sheeting can cause imprecise cutting actions. The presence of the encoder 50 is no indication of varying the speed in accordance with the position of the wood pieces - the only purpose is to determine exactly where the defects are in order for them to be cut properly, as set forth in lines 1-5 of col. 7 ("monitors the movement of the sheeting 28, e.g., through encoder 50, and simply severs the sheeting 28 ... as determined by that known movement"). Therefore, an adjustment of the feeding speed based on the position of the sheeting is not disclosed or suggested in *Bolton et al.*

For this reason, the combination of the two documents does not make obvious the invention as claimed in claims 4 and 5.

New Claims 13 and 14

Claims 13 and 14 have been added.

Claim 13 defines that in the step b)

- a second piece of wood that trails immediately a first piece of wood being cut in the sawing station is already transported into the sawing station while the first piece of wood is still being cut;
- a feeding velocity of the second piece of wood is controlled such that the second piece of wood does not contact within the sawing station the first piece of wood and a spacing of an end face of the second piece of wood relative to a trailing end face of the first piece of wood is minimized.

Claim 14 defines that in step b)

- a second piece of wood that trails immediately a first piece of wood being cut in the sawing station is already transported into the sawing station while the first piece of wood is still being cut;
- a feeding velocity of the second piece of wood is selected such that the second piece of wood does not contact within the sawing station the first piece of wood and a spacing of an end face of the second piece of wood relative to a trailing end face

of the first piece of wood is minimized, and wherein the feeding velocity of the second piece of wood is controlled as a function of a position of the trailing end face of the first piece of wood within the sawing station.

Reference is being had to the above detailed discussion of *Murray*. Murray does not teach that a second piece of wood that trails immediately a first piece of wood being cut in the sawing station is already transported into the sawing station while the first piece of wood is still being cut. The only disclosure is that by continuing the driving action of the conveyor 14 the gap between logs can be decreased.

In regard to claims 13 and 14, applicant would furthermore like to point out that *Murray* also does not show that the feeding velocity of the second piece of wood is controlled or selected such that the second piece of wood does not contact within the sawing station the first piece of wood and that a spacing of an end face of the second piece of wood relative to a trailing end face of the first piece of wood is minimized. Minimization of the spacing between the end faces of the first and second pieces of wood is not addressed or suggested in *Murray*.

In regard to claim 14, the applicant would furthermore like to point out that *Murray* also does not teach that the feeding velocity of the second piece of wood is controlled as a function of a position of the trailing end face of the first piece of wood within the sawing station. There is no feature disclosed in regard to the feeding speed of the second log being controlled based on the position of the end face of the log being cut. The only disclosure in regard to the feeding speed of the second log is that either the conveyor 14 continues to move while the rolls 18-21 are stopped or the conveyor 14 is stopped also. This has nothing to do with a control based on the position of the end face of the log being cut.

Claims 13 and 14 are therefore believed to be allowable.

Exhibit

In order to demonstrate the advantages of the present invention in a more practical setting, applicant will submit a promotional video clip (on CD - to be mailed separately; requires Windows MediaPlayer) that shows a machine operating based on the method that is being claimed in the instant application. The video clip demonstrates how effective and

time-saving the method actually is. Consideration of the exhibit material is respectfully requested.

CONCLUSION

In view of the foregoing, it is submitted that this application is now in condition for allowance and such allowance is respectfully solicited.

Should the Examiner have any further objections or suggestions, the undersigned would appreciate a phone call or **e-mail** from the examiner to discuss appropriate amendments to place the application into condition for allowance.

Authorization is herewith given to charge any fees or any shortages in any fees required during prosecution of this application and not paid by other means to Patent and Trademark Office deposit account 50-1199.

Respectfully submitted on November 30, 2006,

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